

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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09/435,154 11/08/99 YAMAZAKI

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EXAMINER

MM91/0419

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| LOKE, S | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | |
|------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 09/435,154 | Applicant(s) Yamazaki et al. |
| | Examiner Loke | Art Unit 2811 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Feb 5, 2001

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

4) Claim(s) 1-26 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-26 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) Notice of References Cited (PTO-892) 18) Interview Summary (PTO-413) Paper No(s). _____

16) Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) Notice of Informal Patent Application (PTO-152)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 10 20) Other: _____

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1. Claims 3, 8, 16 and 21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification never discloses each of the first conductive layers of the n-channel TFT and the p-channel TFT comprises a single layer as claimed in claims 3, 8, 16 and 21.

2. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 6, 14, 19, it is unclear whether a portion of the second conductive layer partially overlaps the first impurity region.

In claims 1, 6, 14, 19, it is unclear whether another portion of the second conductive layer partially overlaps the third impurity region.

In claims 11, 24, it is unclear whether the first gate electrode partially overlaps the first impurity region.

In claims 11, 24, it is unclear whether the second gate electrode partially overlaps the third impurity region.

In claims 6, 19, it is unclear whether the second conductive layer does not overlap the second impurity region.

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In claims 6, 19, line 15, "said second conductive film" is unclear whether it is being referred to "the second conductive layer".

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka et al.

Miyasaka et al. discloses a LDD-type CMOS TFT circuits formed in a LCD device in figs. 26, 49A, 49B. It comprises: an n-channel TFT having LDD regions [9] and source and drain regions [3], a gate electrode [6] partially overlaps the LDD regions [6]; a p-channel TFT having LDD regions [9] and source and drain regions [3], a gate electrode [6] partially overlaps the LDD regions [6].

It would have been obvious for the LCD device is a ferroelectric LCD device because it is a widely used liquid crystal material.

In regards to claim 12, it would have been obvious to have the claimed materials for the first and second gate electrodes because they are low resistance gate metal materials.

5. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka et al. in view of Chang et al.

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Miyasaka et al. differs from the claimed invention by not showing the gate electrode having a first conductive layer and a second conductive layer.

Chang et al. discloses a gate electrode having a first conductive layer (polysilicon, tungsten silicide) [14a, 16a] and a second conductive layer [22a, 22b] in fig. 5. The second conductive layer [22a] partially overlaps the n-type LDD region [20a].

Since both Miyasaka et al. and Chang et al. teach a gate electrode overlaps the LDD region in a MOSFET, it would have been obvious to have the gate electrode structure of Chang et al. in each of the TFTs of Miyasaka et al. because it enhances hot carrier immunity of the MOSFET.

In regards to claims 4, 9, it would have been obvious to have the claimed materials for the second conductive layers of the MOSFETs because they are low resistance gate metal materials.

6. Claims 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka et al. in view of Chang et al., further in view of Johnson.

Miyasaka et al. and Chang et al. differ from the claimed invention by not showing the CMOS circuit is used in a goggle type display device.

Johnson shows a goggle type LCD display device having a control circuitry and a display screen [12] in figs. 1 and 2.

Since Miyasaka et al. and Johnson teach a LCD device with control circuitry, it would have been obvious to have the CMOS circuit of Miyasaka et al. in the control circuit of Johnson because it increases the speed of the device.

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In regards to claims 17, 22, it would have been obvious to have the claimed materials for the second conductive layers of the MOSFETs because they are low resistance gate metal materials.

7. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka et al. in view of Johnson.

Miyasaka et al. differs from the claimed invention by not showing the CMOS circuit is used in a goggle type display device.

Johnson shows a goggle type LCD display device having a control circuitry and a display screen [12] in figs. 1 and 2.

Since Miyasaka et al. and Johnson teach a LCD device with control circuitry, it would have been obvious to have the CMOS circuit of Miyasaka et al. in the control circuit of Johnson because it increases the speed of the device.

In regards to claim 25, it would have been obvious to have the claimed materials for the first and second gate electrodes of the MOSFETs because they are low resistance gate metal materials.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (703) 308-4920.

sl

April 17, 2001

Steven Loke
Primary Examiner

